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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/560,373

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Gregory Lucius Meredith

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EXAMINER

KISS, ERIC B

ART UNIT

PAPER NUMBER

2192

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/560,373

Applicant(s)

MEREDITH ET AL.

Examiner

Eric B. Kiss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 28-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 28-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The amendment filed 07 December 2005 has been entered.
3. Claims 1-22 and 28-33 are pending.

Response to Amendment

4. Applicant's amendments to the claims, removing occurrences of the indefinite term "SLANG", appropriately address the rejection under 35 U.S.C. § 112, second paragraph. Accordingly, this rejection is withdrawn in view of Applicant's amendments.

However, upon further consideration, a new ground(s) of rejection is made in view of newly discovered prior art.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-14, 21, 22, and 28 are rejected under 35 U.S.C. 103(a) as obvious over Release 8.0 of the Workflow Template software product publicly available from Template Software, Inc. in 1998 as evidenced by "Using the WFT Development Environment", 1998 (hereinafter Template) in view of "XML based Process Management Standard launched by Workflow Management Coalition – 'Wf-XML'," July 7, 1999 [online], accessed 01/03/2006, Workflow Management Coalition, <URL: <http://www.wfmc.org/pr/pr1999-07-07.pdf>>, 4 pages (hereinafter WFXML-99).

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As per claim 1, Template discloses reducing a business process using a programming language (workflow design; see “Introduction” on page 3-2, and in particular, the first paragraph of that section);

dividing the reduced business process into at least one independent transaction and at least one parent interdependent transaction, the at least one parent interdependent transaction comprising two or more child interdependent transactions (see “Creating copy flows” on page 3-20 for distinguishing between concurrent autonomous (using separate flows) business operations and concurrent interdependent (using a single flow) business operations (the copy flow allows operations using the same flow to be represented independently; see, for example, Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks; see also, “Creating compound flows” on page 3-19 for grouping business operations into concurrent interdependent transactions (forms a work item set associated with the compound flow);

executing the at least one independent transaction independently from the at least one parent interdependent transaction to increase throughput and decrease latency of the business process, the at least one independent transaction committing when the last child interdependent transaction commits (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see, for example, “Creating compound flows” on page 3-19); and

transferring committed data associated with the at least one independent transaction and the at least one parent interdependent transaction to a computer component for further processing (see, for example, “Creating compound flows” on page 3-19).

Template does not explicitly disclose the programming language having an XML syntax. However, *WFXML-99* teaches that workflow specifications may be written in such a programmable language having an XML syntax (Wf-XML; see, for example, the figure on p. 2 and the last paragraph of p. 2, continuing onto p. 3). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to include a programmable language having an XML syntax as once taught by *WFXML-99*. One would be motivated to do so to provide a robust tool for specifying workflows.

As per claims 2-3, Template further discloses the children interdependent transactions respectively including one or more actions, the one or more actions being concurrently executed independently from each other, the respective children independent transactions committing when all of their associated actions are completed (see, for example, Table 3-1 on page 3-3 and second paragraph of “About the Task Editor perspective on tasks” on page 6-2; and “Creating compound flows” on page 3-19).

As per claim 4, Template further discloses explicitly defining transaction boundaries for the at least one independent transaction and the children interdependent transactions as a function of a number of actions within the at least one independent transaction and the children interdependent transactions, respectively, in order to define a granularity at an action level (a flow defines a possible route between tasks through which a work item can travel; see Table 3-1 on page 3-3).

As per claim 5, Template further discloses the children interdependent transactions being concurrently executed in isolation from each other (see, for example, Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 6, Template further discloses employing separate machines to execute the at least one independent transaction and the at least one parent interdependent transaction (see, for example, Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 7, Template discloses a user interface component (Workflow Design Editor) and a plurality of model components (tasks, flows, work items, roles, junctions, and labels) accessible through the user interface component and adapted to allow a user to create a model of a business process (workflow design; see “Introduction” on page 3-2, and in particular, the first paragraph of that section), the plurality of model components comprising a distinguishing model component (copy flow junction box; see “Creating copy flows” on page 3-20) for distinguishing between concurrent autonomous (using separate flows) business operations and concurrent interdependent (using a single flow) business operations (the copy flow allows operations using the same flow to be represented independently; see Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks). Template does not explicitly disclose the software comprising a programmable language having an XML syntax. However, *WFXML-99* teaches that workflow specifications may be written in such a programmable language having an XML syntax (Wf-XML; see, for example, the figure on p. 2 and the last paragraph of p. 2, continuing onto p. 3). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to include a programmable language having an XML syntax as once taught by *WFXML-99*. One would be motivated to do so to provide a robust tool for specifying workflows.

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As per claim 8, Template further discloses a transaction grouping model component (compound flow junction box) for grouping business operations into concurrent interdependent transactions (forms a work item set associated with the compound flow; see “Creating compound flows” on page 3-19).

As per claim 9, Template further discloses the grouping model component (compound flow junction box) providing synchronization of concurrent interdependent transactions based on the completion of the concurrent interdependent transactions (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19).

As per claims 10 and 11, Template further discloses associating actions (tasks) with transactions (work items; see Table 3-1 on page 3-3 and second paragraph of “About the Task Editor perspective on tasks” on page 6-2). Therefore, the transaction grouping model component disclosed by Template also functions as an action grouping model as claimed.

As per claim 12, Template further discloses the plurality of model components comprising at least one boundary establishing component (flows) for defining transaction (work item) boundaries (a flow defines a possible route between tasks through which a work item can travel; see Table 3-1 on page 3-3).

As per claim 13, Template further discloses a component for establishing concurrent operations (copy flow; see Table 3-1 on page 3-3 and “Creating copy flows” on page 3-20).

As per claim 14, Template further discloses a component for establishing sequential operations (plain flow; see Table 3-1 on page 3-3).

As per claim 21, as admitted prior art, it was well known and commonly practiced in the computer art at the time the invention was made to incorporate a computer readable medium into a computer system in order to allow data transfer between the medium and the system, such as, for example, for the execution of a program embodied in a CD-ROM medium on such a computer system. Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to have a computer readable medium residing on a computer system as part of a system incorporating the Template product.

As per claim 22, Template further discloses the plurality of model components comprising a component (compound flow junction box) for defining concurrent synchronizing constraints as occurring upon the completion of the autonomous operations (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19).

As per claim 28, Template discloses means for: distinguishing between synchronization of autonomous concurrent operations (using separate flows) and interdependent concurrent operations (using a single flow; the copy flow allows operations using the same flow to be represented independently; see Fig. 3-3 on page 3-12 in which the copy flow junction box supplies the same “REQUISITION” flow to both the “Approve Requisition” and “Check Inventory” tasks); expressing synchronization constraints on completion of autonomous concurrent operations (forming a concatenation of the two or more input work items, as a result of an *And* junction condition; see “Creating compound flows” on page 3-19); and associating transaction operations and groups of business operations (creating a workflow design that represents the flow of work throughout your business; see “Introduction” on page 2-2).

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Template does not explicitly disclose the software comprising a programmable language having an XML syntax. However, *WFXML-99* teaches that workflow specifications may be written in such a programmable language having an XML syntax (Wf-XML; see, for example, the figure on p. 2 and the last paragraph of p. 2, continuing onto p. 3). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to include a programmable language having an XML syntax as once taught by *WFXML-99*. One would be motivated to do so to provide a robust tool for specifying workflows.

7. Claims 15-20 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Template in view of *WFXML-99*, as applied to claims 1 and 12 above, and further in view of U.S. Patent No. 5,940,839 to Chen et al.

As per claim 15, Template discloses such a system for business process modeling including a user interface and a plurality of model components (see disclosure applied above to claim 12) but fails to teach a compensation model component adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see column 5, lines 10-48) adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction (see column 2, line 65 through column 3, line 33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the

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time the invention was made to modify the Template product to incorporate a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures.

As per claim 16, Chen further teaches transactions being children in a parent transaction (as part of an “ancestor tree”; see column 3, lines 24-27) wherein a compensation routine is invoked by the parent transaction (the failed transaction is undone by proceeding from the in-process closest recoverable ancestor (ICRA) transaction; see column 3, lines 11-33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include invocation of a compensation model component by a parent transaction as per the teachings of Chen. One would be motivated to do so allow recovery of a failed transaction by reverting back to a parent transaction.

As per claim 17, Chen further teaches calling compensation routines within the committed interdependent concurrent transactions (see column 9, lines 4-17). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include compensation routines within committed interdependent transactions as per the teachings of Chen. One would be motivated to do so enable elimination of the effect of a transaction.

As per claims 18-20, Chen further teaches calling compensation routines within a failed transaction based on information on committed transactions stored within a database (see column 8, line 61 through column 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the

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Template product to include the compensation model component calling compensation routines within the failed interdependent concurrent transaction based on information on the committed interdependent concurrent transactions stored within a database as per the teachings of Chen. One would be motivated to do so allow for compensation of committed transactions beyond the failure affected scope.

As per claims 29 and 30, Template discloses such a method for business process modeling but fails to expressly disclose failing the at least one parent interdependent transaction when at least one of its children interdependent transactions does not commit, and compensating the at least one failed child transaction, the at least one parent interdependent transaction invoking a compensation routine within the at least one failed child transaction that compensates the at least one failed child transaction; failing the at least one parent interdependent transaction when at least one of its children interdependent transactions does not commit, and compensating the at least one failed child transaction, the at least one parent interdependent transaction invoking a compensation routine within the at least one failed child transaction that compensates the at least one failed child transaction. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for example, column 5, lines 10-48) adapted to compensate committed interdependent concurrent transactions and being invoked upon the occurrence of a failed interdependent concurrent transaction (see, for example, column 2, line 65 through column 3, line 33). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate a compensation model component as once taught by Chen. One would be motivated to do so to

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provide the ability to handle transaction failures. Chen further teaches calling compensation routines within a failed transaction based on information on committed transactions stored within a database (see, for example, column 8, line 61 through column 9, line 5). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to further modify the Template product to include the compensation model component calling compensation routines within the failed interdependent concurrent transaction based on information on the committed interdependent concurrent transactions as per the teachings of Chen. One would be motivated to do so allow for compensation of committed transactions beyond the failure affected scope.

As per claim 31, Template discloses such a method for business process modeling but fails to expressly disclose compensating the at least one parent independent transaction when it does not commit and all of its children interdependent transactions commit. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for example, column 5, lines 10-48) adapted to compensate a parent uncommitted independent transactions and being invoked upon the occurrence of a failed interdependent child transaction (see, for example, column 2, line 65 through column 3, line 33; and col. 8, line 60, through col. 9, line 26). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate such a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures and to allow for compensation of transactions.

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As per claims 32 and 33, Template discloses such a method for business process modeling but fails to expressly disclose compensating the at least one parent interdependent transaction when it does not commit and all of its children interdependent transactions commit, the at least one parent interdependent transaction invoking its own compensation routine. However, Chen teaches, as part of a transaction processing method and system, such a compensation model component (transaction management system (TMS) mechanisms; see, for example, column 5, lines 10-48) adapted to compensate a parent uncommitted interdependent transactions and being invoked upon the occurrence of a failed interdependent child transaction (see, for example, column 2, line 65 through column 3, line 33; and col. 8, line 60, through col. 9, line 26). Therefore, it would have been obvious to one having ordinary skill in the computer art at the time the invention was made to modify the Template product to incorporate such a compensation model component as once taught by Chen. One would be motivated to do so to provide the ability to handle transaction failures and to allow for compensation of transactions.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,968,503 (CHANG et al.) discloses the use of XML to define workflow (see, for example, the Abstract).

US 2002/0019797 A1 (STEWART et al.) discloses the use of XML to define workflow (see, for example, paragraph [0166]).

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US 6,516,322 (MEREDITH) (with common Assignee, Microsoft Corp., and common Inventor, Meredith) acknowledges the prior work of the Workflow Management Coalition in using XML to define workflow (see, for example, col. 2, lines 1-2).

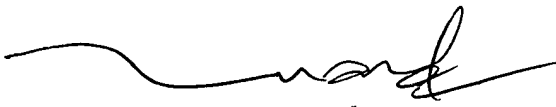
9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist: 571-272-2100.

EBK / *EBK*
January 3, 2006


TUAN DAM
SUPERVISORY PATENT EXAMINER